

IN THE CLAIMS

Please add new claims 16 through 103.

16. (new) A method, comprising:

- a) updating statistics that characterize a transaction over a network between a client and a server so that said statistics reflect an arrival event, said transaction comprising a series of messages sent to said client from said server that each contain their own portion of data that is desired by said client, wherein, said arrival event is the arrival of one of said messages at said client, said statistics being maintained by said client; and
- b) inquiring at said client whether increasing the informational flow of said transaction is appropriate in light of said arrival event.

17. (new) The method of claim 16 wherein said statistics further comprise the state of a queue within said client that queues messages that have been received from said network.

18. (new) The method of claim 17 further comprising said client refusing to allow said increase in said informational flow because said queue state has reached a size that indicates a minimum performance level has been reached.

19. (new) The method of claim 16 wherein said statistics further comprise a window transit time, said window having a size that corresponds to an amount of

said data allowed to be in transit on said network by said client, said window transit time being an estimate of the amount of time needed for said amount of data to be retrieved from said server.

20. (new) The method of claim 19 further comprising said client refusing to allow said increase in said informational flow because said window transit time has reached a value that indicates a minimum performance level has been reached.

21. (new) The method of claim 16 wherein said statistics further comprise an average delay time, said average delay time being the average amount of time said client spends waiting for a plurality of said messages to arrive.

22. (new) The method of claim 21 further comprising said client refusing to allow said increase in said informational flow because said average delay time has reached a value that indicates a minimum performance level has been reached.

23. (new) The method of claim 16 wherein said statistics further comprise an average rate at which said messages arrived to said client.

24. (new) The method of claim 23 further comprising said client refusing to allow said increase in said informational flow because said average rate has increased since a previous increase in informational flow was implemented.

25. (new) The method of claim 16 further comprising, if said informational flow increase is deemed appropriate, said client scheduling said informational flow increase so as to be implemented not until after at least some of said data, that has yet to arrive at said client, arrives at said client.

26. (new) The method of claim 25 wherein said scheduling further comprises identifying a specific amount of data that is to be received at said client after said client's most recent, previous informational flow increase before said information flow increase is to be implemented.

27. (new) The method of claim 26 wherein said identifying further comprises setting of a flow threshold pointer that points to a value indicative of said specific amount, said method further comprising advancing, as a result of a subsequent arrival event, a flow timeout pointer toward said flow threshold pointer, said advancing being an amount that is commensurate with the portion size of said data being carried by a subsequent message that was received by said client so as to trigger said subsequent arrival event.

28. (new) The method of claim 27 further comprising implementing said information flow increase after said flow timeout pointer has reached said flow threshold pointer.

29. (new) The method of claim 28 further comprising resetting said flow timeout pointer to the same value each time said flow timeout pointer reaches said flow threshold pointer.

30. (new) The method of claim 26 wherein said identifying a specific amount further comprises inquiring whether said transaction has experienced any loss events and, if so, identifying said specific amount as a first value; otherwise, if said transaction has not experienced any loss events, identifying said specific amount as a second value, said first value greater than said second value.

31. (new) The method of claim 30 wherein said first value is calculated as a multiple of a window size, said window size being an amount of said data allowed to be in transit on said network by said client.
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32. (new) The method of claim 16 further comprising, if said informational flow increase is deemed appropriate, said client increasing a window size, said window size being an amount of said data allowed to be in transit on said network by said client.

33. (new) The method of claim 32 wherein said window size is increased by a datagram size, said datagram size being a measurement of the size of said portions of data being carried by said messages.

34. (new) The method of claim 16 further comprising, if said informational flow increase is deemed appropriate, said client increasing a datagram size, said datagram size being a measurement of the size of said portions of data being carried by said messages.

35. (new) The method of claim 34 further comprising increasing said datagram size only if a window size has already reached a limit, said window size being an amount of said data allowed to be in transit on said network by said client.

36. (new) The method of claim 16 further comprising inquiring at said client whether decreasing the informational flow of said transaction is appropriate if a second message that is associated with said transaction has not been received by said client within a time period established for said message.

37. (new) The method of claim 16 further comprising said client reducing the informational flow between said client and said server if a second message that is associated with said transaction has not been received by said client within a time period established for said message.

38. (new) A method, comprising:

- a) updating statistics that characterize a transaction over a network between a client and a server so that said statistics reflect an arrival event, said transaction comprising a series of messages sent to said

client from said server that each contain their own portion of data that is desired by said client, wherein, said arrival event is the arrival of one of said messages at said client, said statistics being maintained by said client; and

b) said client increasing the informational flow of said transaction in light of said arrival event.

39. (new) The method of claim 38 wherein said statistics further comprise the state of a queue within said client that queues messages that have been received from said network.

40. (new) The method of claim 39 further comprising said client refusing to allow said increase in said informational flow because said queue state has reached a size that indicates a minimum performance level has been reached.

41. (new) The method of claim 38 wherein said statistics further comprise a window transit time, said window having a size that corresponds to an amount of said data allowed to be in transit on said network by said client, said window transit time being an estimate of the amount of time needed for said amount of data to be retrieved from said server.

42. (new) The method of claim 41 further comprising said client refusing to allow said increase in said informational flow because said window transit time

has reached a value that indicates a minimum performance level has been reached.

43. (new) The method of claim 38 wherein said statistics further comprise an average delay time, said average delay time being the average amount of time said client spends waiting for a plurality of said messages to arrive.

44. (new) The method of claim 43 further comprising said client refusing to allow said increase in said informational flow because said average delay time has reached a value that indicates a minimum performance level has been reached.

45. (new) The method of claim 38 wherein said statistics further comprise an average rate at which said messages arrived to said client.

46. (new) The method of claim 45 further comprising said client refusing to allow said increase in said informational flow because said average rate has increased since a previous increase in informational flow was implemented.

47. (new) The method of claim 38 further comprising said client scheduling said informational flow increase so as to be implemented not until after at least some of said data, that has yet to arrive at said client, arrives at said client.

48. (new) The method of claim 47 wherein said scheduling further comprises identifying a specific amount of data that is to be received at said client after said client's most recent, previous informational flow increase before said information flow increase is to be implemented.

49. (new) The method of claim 48 wherein said identifying further comprises setting of a flow threshold pointer that points to a value indicative of said specific amount, said method further comprising advancing, as a result of a subsequent arrival event, a flow timeout pointer toward said flow threshold pointer, said advancing being an amount that is commensurate with the portion size of said data being carried by a subsequent message that was received by said client so as to trigger said subsequent arrival event.

50. (new) The method of claim 49 further comprising implementing said information flow increase after said flow timeout pointer has reached said flow threshold pointer.

51. (new) The method of claim 50 further comprising resetting said flow timeout pointer to the same value each time said flow timeout pointer reaches said flow threshold pointer.

52. (new) The method of claim 48 wherein said identifying a specific amount further comprises inquiring whether said transaction has experienced any loss events and, if so, identifying said specific amount as a first value; otherwise, if

said transaction has not experienced any loss events, identifying said specific amount as a second value, said first value greater than said second value.

53. (new) The method of claim 52 wherein said first value is calculated as a multiple of a window size, said window size being an amount of said data allowed to be in transit on said network by said client.

54. (new) The method of claim 38 further comprising said client increasing a window size in order to implement said informational flow increase, said window size being an amount of said data allowed to be in transit on said network by said client.

55. (new) The method of claim 54 wherein said window size is increased by a datagram size, said datagram size being a measurement of the size of said portions of data being carried by said messages.

56. (new) The method of claim 38 further comprising said client increasing a datagram size in order to implement said informational flow increase, said datagram size being a measurement of the size of said portions of data being carried by said messages.

57. (new) The method of claim 56 further comprising increasing said datagram size only if a window size has already reached a limit, said window size being an amount of said data allowed to be in transit on said network by said client.

58. (new) The method of claim 38 further comprising inquiring at said client whether decreasing the informational flow of said transaction is appropriate if a second message that is associated with said transaction has not been received by said client within a time period established for said message.

59. (new) The method of claim 38 further comprising said client reducing the informational flow between said client and said server if a second message that is associated with said transaction has not been received by said client within a time period established for said message.

60. (new) A machine readable medium having instructions that when executed by a processing system cause said processing system to perform a method, said method comprising:

a) updating statistics that characterize a transaction over a network between a client and a server so that said statistics reflect an arrival event, said transaction comprising a series of messages sent to said client from said server that each contain their own portion of data that is desired by said client, wherein, said arrival event is the arrival of one of said messages at said client, said statistics being maintained by said client; and

b) inquiring at said client whether increasing the informational flow of said transaction is appropriate in light of said arrival event.

61. (new) The machine readable medium of claim 59 wherein said statistics further comprise the state of a queue within said client that queues messages that have been received from said network.

62. (new) The machine readable medium of claim 61 wherein said method further comprises said client refusing to allow said increase in said informational flow because said queue state has reached a size that indicates a minimum performance level has been reached.

63. (new) The machine readable medium of claim 60 wherein said statistics further comprise a window transit time, said window having a size that corresponds to an amount of said data allowed to be in transit on said network by said client, said window transit time being an estimate of the amount of time needed for said amount of data to be retrieved from said server.

64. (new) The machine readable medium of claim 63 wherein said method further comprises said client refusing to allow said increase in said informational flow because said window transit time has reached a value that indicates a minimum performance level has been reached.

65. (new) The machine readable medium of claim 60 wherein said statistics further comprise an average delay time, said average delay time being the average amount of time said client spends waiting for a plurality of said messages to arrive.

66. (new) The machine readable medium of claim 65 wherein said method further comprises said client refusing to allow said increase in said informational flow because said average delay time has reached a value that indicates a minimum performance level has been reached.

67. (new) The machine readable medium of claim 60 wherein said statistics further comprise an average rate at which said messages arrived to said client.

68. (new) The machine readable medium of claim 67 wherein said method further comprises said client refusing to allow said increase in said informational flow because said average rate has increased since a previous increase in informational flow was implemented.

69. (new) The machine readable medium of claim 60 wherein said method further comprises, if said informational flow increase is deemed appropriate, said client scheduling said informational flow increase so as to be implemented not until after at least some of said data, that has yet to arrive at said client, arrives at said client.

70. (new) The machine readable medium of claim 69 wherein said scheduling further comprises identifying a specific amount of data that is to be received at said client after said client's most recent, previous informational flow increase before said information flow increase is to be implemented.

71. (new) The machine readable medium of claim 70 wherein said identifying further comprises setting of a flow threshold pointer that points to a value indicative of said specific amount, said method further comprising advancing, as a result of a subsequent arrival event, a flow timeout pointer toward said flow threshold pointer, said advancing being an amount that is commensurate with the portion size of said data being carried by a subsequent message that was received by said client so as to trigger said subsequent arrival event.

72. (new) The machine readable medium of claim 71 wherein said method further comprises implementing said information flow increase after said flow timeout pointer has reached said flow threshold pointer.

73. (new) The machine readable medium of claim 72 wherein said method further comprises resetting said flow timeout pointer to the same value each time said flow timeout pointer reaches said flow threshold pointer.

74. (new) The machine readable medium of claim 70 wherein said identifying a specific amount further comprises inquiring whether said transaction has experienced any loss events and, if so, identifying said specific amount as a first value; otherwise, if said transaction has not experienced any loss events, identifying said specific amount as a second value, said first value greater than said second value.

75. (new) The machine readable medium of claim 74 wherein said first value is calculated as a multiple of a window size, said window size being an amount of said data allowed to be in transit on said network by said client.

76. (new) The machine readable medium of claim 70 wherein said method further comprises, if said informational flow increase is deemed appropriate, said client increasing a window size, said window size being an amount of said data allowed to be in transit on said network by said client.

77. (new) The machine readable medium of claim 76 wherein said window size is increased by a datagram size, said datagram size being a measurement of the size of said portions of data being carried by said messages.

78. (new) The machine readable medium of claim 78 wherein said method further comprises, if said informational flow increase is deemed appropriate, said client increasing a datagram size, said datagram size being a measurement of the size of said portions of data being carried by said messages.

79. (new) The machine readable medium of claim 78 wherein said method further comprises increasing said datagram size only if a window size has already reached a limit, said window size being an amount of said data allowed to be in transit on said network by said client.

80. (new) The machine readable medium of claim 60 wherein said method further comprises inquiring at said client whether decreasing the informational flow of said transaction is appropriate if a second message that is associated with said transaction has not been received by said client within a time period established for said message.

81. (new) The machine readable medium of claim 60 wherein said method further comprises said client reducing the informational flow between said client and said server if a second message that is associated with said transaction has not been received by said client within a time period established for said message.

82. (new) A machine readable medium having instructions that when executed by a processing system cause said processing to perform a method, said method comprising:

- a) updating statistics that characterize a transaction over a network between a client and a server so that said statistics reflect an arrival event, said transaction comprising a series of messages sent to said client from said server that each contain their own portion of data that is desired by said client, wherein, said arrival event is the arrival of one of said messages at said client, said statistics being maintained by said client; and

b) said client increasing the informational flow of said transaction in light of said arrival event.

83. (new) The machine readable medium of claim 82 wherein said statistics further comprise the state of a queue within said client that queues messages that have been received from said network.

84. (new) The machine readable medium of claim 83 wherein said method further comprises said client refusing to allow said increase in said informational flow because said queue state has reached a size that indicates a minimum performance level has been reached.

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85. (new) The machine readable medium of claim 82 wherein said statistics further comprise a window transit time, said window having a size that corresponds to an amount of said data allowed to be in transit on said network by said client, said window transit time being an estimate of the amount of time needed for said amount of data to be retrieved from said server.

86. (new) The machine readable medium of claim 85 wherein said method further comprises said client refusing to allow said increase in said informational flow because said window transit time has reached a value that indicates a minimum performance level has been reached.

87. (new) The machine readable medium of claim 82 wherein said statistics further comprise an average delay time, said average delay time being the average amount of time said client spends waiting for a plurality of said messages to arrive.

88. (new) The machine readable medium of claim 87 wherein said method further comprises said client refusing to allow said increase in said informational flow because said average delay time has reached a value that indicates a minimum performance level has been reached.

89. (new) The machine readable medium of claim 82 wherein said statistics further comprise an average rate at which said messages arrived to said client.

90. (new) The machine readable medium of claim 89 wherein said method further comprises said client refusing to allow said increase in said informational flow because said average rate has increased since a previous increase in informational flow was implemented.

91. (new) The machine readable medium of claim 82 wherein said method further comprises said client scheduling said informational flow increase so as to be implemented not until after at least some of said data, that has yet to arrive at said client, arrives at said client.

92. (new) The machine readable medium of claim 91 wherein said scheduling further comprises identifying a specific amount of data that is to be received at said client after said client's most recent, previous informational flow increase before said information flow increase is to be implemented.

93. (new) The machine readable medium of claim 92 wherein said identifying further comprises setting of a flow threshold pointer that points to a value indicative of said specific amount, said method further comprising advancing, as a result of a subsequent arrival event, a flow timeout pointer toward said flow threshold pointer, said advancing being an amount that is commensurate with the portion size of said data being carried by a subsequent message that was received by said client so as to trigger said subsequent arrival event.

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94. (new) The machine readable medium of claim 93 wherein said method further comprises implementing said information flow increase after said flow timeout pointer has reached said flow threshold pointer.

95. (new) The machine readable medium of claim 94 wherein said method further comprises resetting said flow timeout pointer to the same value each time said flow timeout pointer reaches said flow threshold pointer.

96. (new) The machine readable medium of claim 92 wherein said identifying a specific amount further comprises inquiring whether said transaction has experienced any loss events and, if so, identifying said specific amount as a first

value; otherwise, if said transaction has not experienced any loss events, identifying said specific amount as a second value, said first value greater than said second value.

97. (new) The machine readable medium of claim 96 wherein said first value is calculated as a multiple of a window size, said window size being an amount of said data allowed to be in transit on said network by said client.

98. (new) The machine readable medium of claim 82 wherein said method further comprises said client increasing a window size in order to implement said informational flow increase, said window size being an amount of said data allowed to be in transit on said network by said client.

99. (new) The machine readable medium of claim 98 wherein said window size is increased by a datagram size, said datagram size being a measurement of the size of said portions of data being carried by said messages.

100. (new) The machine readable medium of claim 82 wherein said method further comprises said client increasing a datagram size in order to implement said informational flow increase, said datagram size being a measurement of the size of said portions of data being carried by said messages.

101. (new) The machine readable medium of claim 100 wherein said method further comprises increasing said datagram size only if a window size has

already reached a limit, said window size being an amount of said data allowed to be in transit on said network by said client.

102. (new) The machine readable medium of claim 60 wherein said method further comprises inquiring at said client whether decreasing the informational flow of said transaction is appropriate if a second message that is associated with said transaction has not been received by said client within a time period established for said message.

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103. (new) The machine readable medium of claim 60 wherein said method further comprises said client reducing the informational flow between said client and said server if a second message that is associated with said transaction has not been received by said client within a time period established for said message.

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